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UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 09/853,339
Filed: 5/11/2001
Inventor: Fargo, et al.
Group Art Unit: 3651 /
Examiner: Tran, Khoi H.
Title: Escalator Support Structure

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APPEAL BRIEF

Dear Sir:

Appellant submits this Appeal Brief pursuant to the Notice of Appeal filed May 31, 2005. Enclosed is a credit card payment form authorizing the charge for the appeal brief fee. Any additional fees or credits may be charged or applied to Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds.

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REAL PARTY IN INTEREST

The real party in interest is Otis Elevator Company, the assignee of the entire right and interest in this Application.

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RELATED APPEALS AND INTERFERENCES

Appeal No. 2004-0389 relates to the subject RCE application. A copy of the decision from the Board of Patent Appeals and Interferences is attached as an exhibit.

STATUS OF CLAIMS

Claims 1, 14, and 27-33 are pending, rejected, and appealed.

STATUS OF AMENDMENTS

Appellant's amendment dated April 27, 2005, which included proposed amendments to the claims to address 35 U.S.C. 112 rejections, has not been entered.

SUMMARY OF CLAIMED SUBJECT MATTER

The subject invention relates to an improved support structure for an escalator that includes at least one stamping or pre-made module. Figure 1 illustrates an escalator supported on a known truss structure 20. The truss 20 is made from multiple segments 22 of tubular steel that are cut to specified lengths. Each of these segments 22 is manually welded to adjacent segments to form the truss 20. Typically, the truss 20 includes a bottom landing structure 24, a top landing structure 26, and a rise structure 28 that interconnects the bottom 24 and top 26 landing structures. Once the truss 20 is formed, brackets are attached to the truss to support tracks, exterior cladding, and other escalator hardware (not shown). Attachment of the brackets requires additional labor and usually requires shimming so that escalator components can be properly aligned when installed, which is time consuming and expensive. Paragraph [26].

To address these problems, the subject invention utilizes a unique support structure assembly 30 for an escalator, which is shown in Figure 2. The support structure includes a bottom landing support portion 32, a top landing support portion (not shown) similar to the bottom landing support portion 32, and a rise portion 36 that interconnects the bottom 32 and top landing supports. The rise portion 36 includes at least one module. The module is preferably made from steel and can be created using bending or stamping processes that are well known in the art. Paragraph [27].

In the illustrated examples, multiple modules are interconnected along the rise portion 36. The claims on appeal cover embodiments like that shown in Figure 11. Although multiple modules may provide support for the rise, at least one module comprises a steel sheet. In the embodiment of Figure 11, portions of the structure near machine components, include modules as support members. The illustrated example has a steel sheet 120 that preferably is welded in place, effectively covering the drive machine. The module sheet 120 replaces tubular members adjacent to the drive machine. Paragraph [32].

The steel stamping modules allow for easy assembly and installation of an escalator, especially in older buildings that are being renovated. The modules also reduce the number of brackets and attachment hardware while providing the required structural strength and stiffness. Paragraph [36].

Claim 1 is directed to a support structure assembly for an escalator and includes the following combination of features: a bottom landing support; a top landing support; and a rise for interconnecting the bottom landing support to the top landing support wherein the rise includes at least one module wherein the module comprises a steel sheet covering an escalator machine, the

steel sheet having a top edge, a bottom edge and two side edges extending between the top edge and the bottom edge, respectively, the steel sheet presenting a continuous, unbroken and generally planar exterior surface from the top edge to the bottom edge and between the side edges. Paragraphs [27] and [32].

Claim 27 is directed to a support structure assembly for an escalator and includes the following combination of features: a bottom landing; a top landing; and a rise comprising a plurality of support sub-modules wherein one of the support sub-modules includes a steel plate having a top edge, a bottom edge and two side edges extending between the top edge and the bottom edge, respectively, the steel plate presenting a continuous, unbroken and generally planar exterior surface from the top edge to the bottom edge and between the side edges for covering an escalator drive machine. Paragraphs [27] and [32].

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

(A) Claims 1, 14, and 27-33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,374,981 to Gschwendtner et al. (Gschwendtner).

(B) Claims 1, 14, and 27-33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 2,936,872 to Kneipp (Kneipp) in view of U.S. Patent No. 6,374,981 to Gschwendtner et al. (Gschwendtner).

(C) Claims 14 and 30 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

(D) Claim 32 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

ARGUMENT

A. Obviousness Rejection Over Gschwendtner

The examiner has rejected claims 1, 14 and 27-33 under 35 U.S.C. 103(a) as being unpatentable over Gschwendtner. The examiner admits that Gschwendtner does not disclose all of the claimed features but argues that it would be obvious to incorporate the missing features into the Gschwendtner structure. Appellant disagrees.

Gschwendtner discloses an escalator 1 with building supports 2, indicated by the vertical arrows in Figure 1. Figure 2 shows the support construction of the escalator with a framework mode of construction that consists of two wall supports connected by crossbeams. The wall supports include tension and compression trusses 12, 13, and framework struts 14. Figure 3 shows a cross-sectional view of the escalator 1 with the left-hand side representing a standard support construction with basic wall supports 4 and with the right-hand side representing a reinforced support incorporating the invention. The reinforced support includes upper and lower crossbeams 6, 7, and lateral wall supports 4, 5.

Figure 4 shows that the double wall support is formed by the lateral flange mounting of the supplementary wall support 5 to the base wall support 4. The wall support is of a framework mode of construction with each support including the compression truss 12, tension truss 13, and framework strut 14. Different embodiments of the wall supports are shown in Figures 6-9.

Figure 8 shows one embodiment of the double wall supports where the supplemental wall supports 21 consist of “solid steel plates in facing contact with the basic wall supports.” Column 4, lines 10-13. The plate includes passage openings 22.

Claim 1

Claim 1 recites a bottom landing support, a top landing support, and a rise for interconnecting the bottom landing support to the top landing support wherein the rise includes at least one module. Claim 1 further recites that the module comprises a steel sheet covering an escalator machine, the steel sheet having a top edge, a bottom edge and two side edges extending between the top edge and the bottom edge, respectively, the steel sheet presenting a continuous, unbroken and generally planar exterior surface from the top edge to the bottom edge and between the side edges.

The examiner admits that Gschwendtner does not disclose the steel sheet being continuous and unbroken, but refers to the embodiment of Figure 8 that discloses a solid plate. The examiner states that Gschwendtner is silent as to the specifics of the steel plate having a continuous, unbroken surface. However, the examiner states that “Gschwendtner Figure 1 does show a continuous unbroken coverage extends the entire one side of the escalator support structure.”

First, the coverage shown in Figure 1 is simply exterior cladding that covers the support framework shown in Figure 2. This cladding is clearly not a support structure assembly for an escalator as set forth in the claims. Second, the embodiment shown in Figure 8 does not have a continuous, unbroken surface as the sheet clearly includes passage openings 22.

The examiner has not provided any arguments, i.e. has not provided any motivation or suggestion, to explain why one of ordinary skill in the art would modify Gschwendtner to eliminate the passage openings 22 shown in Figure 8. The examiner has pointed to no teaching in Gschwendtner of any particular benefit to eliminating the passage openings 22. In addition, there is nothing in Gschwendtner that would have led one of ordinary skill in the art to believe that the configuration in Figure 8 of Gschwendtner was in any way deficient for Gschwendtner's purposes or was in need of modification, especially as the Gschwendtner sheet was specifically designed to provide passage openings 22.

One of ordinary skill in the art would have found no reason, suggestion, or incentive for attempting to modify Gschwendtner so as to arrive at the subject matter of claim 1 other than through the luxury of hindsight accorded one who first viewed appellant's disclosure. Thus, the examiner has failed to provide prima facie support to render claim 1 obvious and appellant requests that the rejection be reversed.

Claim 14

Claim 14 includes the feature that the module is welded to other portions of the rise along edges of the steel sheet such that the module extends along the rise a distance sufficient to cover the entire escalator machine.

The examiner admits that Gschwendtner does not disclose this feature but argues that Gschwendtner teaches that screw connections could be replaced by welds, citing column 3, lines 44-46. The examiner further argues that it would have been obvious to weld the plate onto the

rise along the edges because "it facilitates another attachment means for a solid plate wall." Appellant respectfully disagrees.

Column 3, lines 44-46, specifically indicates that welding can be used to replace screws in the embodiment of Figures 4 and 5. There is no reference linking welding to the embodiment of Figure 8. Further, there is absolutely no teaching in Gschwendtner of welding a steel sheet as defined in the subject claims along edges of the steel sheet.

Gschwendtner actually teaches away from an edge attachment configuration for a steel sheet. As set forth at column 1, line 65 to column 2, line 3, the benefits of Gschwendtner are achieved by providing a supplemental wall support that is flange-mounted to each of the two basic wall supports to provide a double wall support that increases rigidity. In Figure 9 Gschwendtner discloses how the embodiment of Figure 8 is flange-mounted to the basic wall supports with screw connections 24. There is no disclosure of welding the embodiment of Figure 8 along edges as set forth in claim 14.

The examiner has not provided any arguments, i.e. has not provided any motivation or suggestion, to explain why one of ordinary skill in the art would modify Gschwendtner to weld a steel sheet along edges of the sheet as set forth in claim 14. The examiner has pointed to no teaching in Gschwendtner of any particular benefit to using welding along edges. In addition, there is nothing in Gschwendtner that would have led one of ordinary skill in the art to believe that the steel plate of Figure 8 was in any way deficient for Gschwendtner's purposes or was in need of modification, especially as the Gschwendtner plate was specifically designed to achieve a beneficial flange-mounting structure. One of ordinary skill in the art would have found no reason, suggestion, or incentive for attempting to combine these references so as to arrive at the

subject matter of claim 14 other than through the luxury of hindsight accorded one who first viewed appellant's disclosure.

Further, even assuming Gschwendtner could be modified in the manner suggested by the examiner, the examiner's proposed modification would still not satisfy all of the claimed elements. As discussed above, the examiner is arguing that Gschwendtner teaches replacing the screw connections with welding and that this teaching is sufficient to provide the motivation to modify Gschwendtner to have a solid plate configuration with a continuous unbroken surface, citing column 3, lines 44-46 of Gschwendtner to support this motivation.

Again, this section specifically refers the embodiment set forth in Figure 5 and does not make reference to the embodiment shown in Figure 8. In Figure 5, opposing struts 14 are mounted to an intermediate member 16 with a screw connection 15. This configuration is very different than that described in Figure 8. The description in Gschwendtner regarding Figure 8 only makes reference to a double wall configuration with supplementary wall supports 21 that face basic wall supports. The supplementary wall support 21 of Figure 8 is provided with passage openings 22 and is connected with the basic wall support with screws.

Further, the screw connection interface, indicated by centerlines at the top and bottom of Figure 8 where the supplementary wall support 21 overlaps the basic wall support, is spaced apart from the passage openings 22. The passage openings 22 are not openings for screws, as the passage openings 22 do not line up for an attachment interface with the basic wall support. Thus, even if the screw connections of Figure 8 could be replaced with welding, the passage openings 22 would still remain in the supplementary wall support 21. Thus, even if Gschwendtner could be modified in the manner presented by the examiner, there still would be

no teaching of a steel sheet presenting a continuous, unbroken and generally planar exterior surface from the top edge to the bottom edge and between the side edges, as set forth in claims 1 and 14.

Thus, for the many reasons set forth above, appellant requests that the rejection of claim 14 be reversed.

Claim 27

Claim 27 recites a bottom landing, a top landing, and a rise comprising a plurality of support sub-modules wherein one of the support sub-modules includes a steel plate having a top edge, a bottom edge and two side edges extending between the top edge and the bottom edge, respectively. Claim 27 further recites that the steel plate presents a continuous, unbroken and generally planar exterior surface from the top edge to the bottom edge and between the side edges for covering an escalator drive machine.

For the reasons set forth above with regard to claim 1, Gschwendtner does not disclose, suggest, or teach a steel plate that presents a continuous, unbroken and generally planar exterior surface from the top edge to the bottom edge and between the side edges for covering an escalator drive machine. Figure 8 clearly discloses a sheet having passage openings 22 and the examiner has not provided any arguments detailing why the sheet of Figure 8 of Gschwendtner would be modified to eliminate these openings.

Further, Gschwendtner does not disclose a rise that is comprised of a plurality of support sub-modules where one of the support sub-modules comprises the claimed steel sheet. The

examiner argues that the reversed N-shaped sections shown in Figure 2 are support sub-modules. Appellant disagrees.

Figure 2 discloses a framework mode of construction that consists of two wall supports connected by crossbeams. Not visible in the frame work are “junctions, which may be required by the length of the construction, in the tension and compression trusses 12 and 13 of the wall supports, which due to limited raw material lengths as well as reasons arising from manufacturing or assembly engineering, are inevitable.” Column 3, lines 5-14. Thus, Gschwendtner discloses a traditional truss framework construction configuration and does not disclose a rise that is made from a plurality of sub-modules as claimed.

Finally, Gschwendtner does not disclose, suggest, or teach using a steel plate as claimed to cover an escalator drive machine. Escalator drive machines typically have been located under landings, not along the rise. The escalator drive machines drive conveying plates along the rise. There is no showing of an escalator drive machine anywhere in the drawings of Gschwendtner and there certainly is no showing of an escalator drive machine being located in the rise section of the escalator.

Thus, for the many reasons set forth above, appellant requests that the rejection of claim 27 be reversed.

Claim 28

Claim 28 recites that a first one of the side edges is attached to a first one of the support sub-modules and a second one of the side edges is attached to a second one of the support sub-modules.

The examiner argues that “it is obvious that one edge of Gschwendtner ‘981 steel plate is attached to a first one of the support sub-modules and a second one of the side edges is attached to a second one of the support sub-modules so that the entire rise can be covered as shown in Figure 1.” Appellant disagrees with this interpretation of Gschwendtner.

First, as discussed above, the cladding shown in Figure 1 is clearly a covering for the truss framework structure shown in Figure 2, and is not part of the support structure for the escalator. Second, claim 28 recites that side edges of the steel plate are attached to first and second support sub-modules. Figure 2 of Gschwendtner clearly does not disclose such a configuration.

The N-shaped support sections, which the examiner argues correspond to the claimed sub-modules, clearly do not have side edges as claimed. Further, the framework struts 14 that make up the N-shape are attached to the upper 12 and lower 13 trusses, which extend along the entire length of the escalator. Thus, there is no teaching of a steel sheet having side edges that are attached to first and second sub-modules as claimed.

Appellant asserts that Gschwendtner does not disclose, suggest, or teach the features set forth in claim 28 and requests that the rejection be reversed.

Claim 29

Claim 29 recites that the steel plate is welded along the side edges to connect the steel plate to the first one and the second one of the support sub-modules.

For the reasons set forth above with regard to claim 14, Gschwendtner does not disclose, suggest, or teach welding along side edges of a steel plate. Further, Gschwendtner does not

disclose, suggest, or teach welding along such side edges to attach these side edges to first and second sub-modules.

As shown in Figure 2, Gschwendtner discloses using a plurality of struts 14 that are attached to upper 12 and lower 13 trusses that extend along a length of the escalator. These struts do not have “side edges” as defined in claim 29. Further, these “side edges” are not attached to other sub-modules. There certainly is no disclosure that these “side edges” are attached to other sub-modules by welding.

The examiner argues that providing “welding attachment to replace bolt attachment is contemplated in Gschwendtner ‘981.” Even assuming this assertion is true with regard to Figure 8, replacing the bolt attachment does not eliminate the passage openings 22. The sheet in Gschwendtner would still not have a continuous, unbroken surface extending from top to bottom and from side to side.

Appellant asserts that Gschwendtner does not disclose, suggest, or teach the features set forth in claim 29 and requests that the rejection be reversed.

Claim 30

Claim 30 recites that the steel plate extends along the rise a distance sufficient to cover the entire escalator drive machine. The examiner argues that the steel sheet in Gschwendtner covers the entire one side of the escalator drive machine, referring to Figure 2. Appellant disagrees.

As discussed above with regard to claim 27, the drive machine, which drives the conveying plates is not shown to be located within the rise. Figure 2 of Gschwendtner does not

disclose the position of any type of driving machine. The conveying plates themselves cannot move unless an escalator drive machine powers them. Gschwendtner does not discuss any driving machine and does not discuss a mounting location for such a driving machine. There is nothing in Gschwendtner to suggest or teach that the escalator drive machine is positioned along the rise contrary to a traditional mounting location.

Appellant asserts that Gschwendtner does not disclose, suggest, or teach the features set forth in claim 30 and requests that the rejection be reversed.

Claim 31

Claim 31 recites that each of the support sub-modules is attached to adjacent support sub-modules forming a rigid framework.

For the reasons set forth above with regard to claim 27, Gschwendtner does not disclose forming a rise from a plurality of support sub-modules. Gschwendtner certainly does not teach attaching adjacent support modules to each other. The N-shaped support sections, which the examiner argues correspond to the claimed sub-modules are not attached to each other. The struts 14 formed of the double wall construction 4, 5, are attached to the upper 12 and lower 13 trusses. See Figures 4 and 5.

Appellant asserts that Gschwendtner does not disclose, suggest, or teach the features set forth in claim 31 and requests that the rejection be reversed.

Claim 32

Claim 32 recites that the module is welded to other portions of the rise along edges of the steel sheet such that the module extends along the rise a distance sufficient to cover an entire lateral side of the escalator machine.

For the reasons set forth above with regard to claims 1 and 14, Gschwendtner does not disclose, suggest, or teach a steel sheet with a continuous, unbroken surface from the top to bottom and from side to side wherein the sheet is welded along the side edges for attachment to other portions of the rise. Further, Gschwendtner does not disclose covering an entire lateral side of the escalator machine located within the rise with the steel sheet.

Escalator machines typically have been located under landings, not along the rise. The escalator machines drive conveying plates along the rise. There is no showing or discussion of an escalator machine anywhere in Gschwendtner. There certainly is no showing of an escalator machine being located in the rise section of the escalator. Even assuming the conveying plates are properly interpreted as corresponding to the claimed escalator machine, the claimed steel sheet does not cover an entire lateral side of the escalator machine as set forth in claim 32.

Appellant asserts that Gschwendtner does not disclose, suggest, or teach the features set forth in claim 32 and requests that the rejection be reversed.

Claim 33

Claim 33 recites that the steel plate extends along the rise a distance sufficient to cover an entire lateral side of the escalator drive machine.

For the reasons set forth above with regard to claim 27, Gschwendtner does not disclose an escalator drive machine being located in the rise section of the escalator. The escalator drive machine provides the power that drives the conveying plates. No such structure is mentioned or shown in Gschwendtner. As such, there is no teaching of covering an entire lateral side of the escalator drive machine with the steel plate as claimed.

The examiner has not provided any arguments detailing where this feature is disclosed. Appellant asserts that the rejection of claim 33 is improper and requests that the rejection be reversed.

B. Obviousness Rejection Of Kneipp As Modified By Gschwendtner

Claims 1, 14, and 27-33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kneipp in view of Gschwendtner.

Claim 1

Claim 1 requires a rise with a steel sheet having a top edge, a bottom edge and two side edges extending between the top edge and the bottom edge, respectively, the steel sheet presenting a continuous, unbroken and generally planar exterior surface from the top edge to the bottom edge and between the side edges.

The examiner argues that Kneipp discloses an escalator support structure with a rise having at least one module 10, 11. The examiner argues that the modules 10, 11 are sheets that provide a continuous, and unbroken surface as defined in claim 1. Appellant disagrees.

Kneipp discloses a truss-like support structure for supporting an escalator that is formed from a plurality of tubular elements, not sheet elements. The truss-like support structure includes two main girders 1, 2 that form the balustrades, and which include upper chords 1a, 2a and lower chords 1b, 2b. The upper and lower chords are connected with each other by vertically positioned tubular braces 9 and diagonally arranged braces 9b. Track rails 3 are directly attached by tubular sleeves 4 to horizontally extending pipes 5 that connect the two main girders 1, 2 with each other. Other track rails 6 are connected to one end of horizontal arms 7, the other ends of which are connected by tubular sleeves 8 to the vertical tubular braces 9 of the main girders 1, 2 of the supporting frame structure.

Inner wall panels 12, 13 are connected by horizontal members 12a and 13 and tubular sleeves 15 to the tubular brackets 9. Outer wall panels 10, 11 are connected by other horizontal arms 10a, 11a and sleeves 14 to the tubular braces 9 of the girders 1, 2. The inner 12, 13 and outer 10, 11 wall panels are merely cladding used to cover the support structure. The cladding does not itself form part of the support structure.

Even if the cladding could be considered part of the support structure, there is no disclosure in Kneipp indicating that these wall panels present a continuous, unbroken surface as set forth in the claims. The cross-sectional view of Figure 2 is insufficient to support this assertion. Further, there is no teaching that these wall panels are formed from steel.

The examiner admits that Kneipp does not disclose the use of steel sheets but argues that it would have been obvious to have made the Kneipp wall panels out of the steel sheets as taught by Gschwendtner. Appellant disagrees.

As set forth at column 1, lines 17-24, Kneipp's goal was to decrease the weight of the escalator to reduce manufacturing and assembly costs. Kneipp accomplished this goal by constructing an escalator "with a low weight in that the elements of construction for producing the supporting frame work structure consist of tubular elements" Column 1, lines 41-43.

The examiner is proposing to utilize steel sheets as taught by Gschwendtner in the support structure of Kneipp. This proposed modification would clearly defeat the benefits achieved by Kneipp with regard to the specific escalator support structure because such a modification would increase the overall weight of the escalator. In other words, the examiner's modification would render Kneipp unsatisfactory for Kneipp's intended purpose. The examiner's proposed modification cannot render the prior art unsatisfactory for its intended purpose. See MPEP 2143.01.

Even assuming proper motivation exists to modify Kneipp in the manner suggested by the examiner, the modification would still not satisfy all of the claimed elements. The examiner is arguing that Kneipp should be modified to include steel sheets as taught by Gschwendtner. Gschwendtner teaches steel sheets with pass through openings 22. The examiner has not provided any arguments detailing why the Gschwendtner steel sheets would be modified to eliminate these pass through openings. To modify Kneipp with the steel sheets as taught by Gschwendtner would require steel sheets with pass through openings. This would not result in a steel sheet with a continuous, unbroken surface extending from top to bottom and from side to side.

Thus, for the many reasons set forth above, the rejection of claim 1 is improper and appellant respectfully requests that the rejection be reversed.

Claim 14

Claim 14 includes the feature that the module is welded to other portions of the rise along edges of the steel sheet such that the module extends along the rise a distance sufficient to cover the entire escalator machine.

For the reasons set forth above with regard to claim 1, there is no motivation or suggestion to modify Kneipp in the manner suggested by the examiner. Additionally, Kneipp and Gschwendtner do not disclose, suggest, or teach the features of claim 14.

The examiner admits that Kneipp does not disclose this feature but argues that Gschwendtner teaches that welds could replace screw connections. The examiner argues that it would be obvious “to have welded Kneipp ‘872 wall plates onto the support sub-modules because it facilitates another way to attach the wall plates onto portions of the rise, as taught by Gschwendtner ‘981.” For the reasons set forth above with regard to claim 14 in Section A, Gschwendtner does not disclose, suggest, or teach welding side edges of a steel sheet as defined in the claims.

Further, as discussed above with regard to claim 1, the wall panels 10, 11 in Kneipp do not form part of the escalator support structure as these panels are merely cladding cover. The examiner appears to recognize this as the argument presented by the examiner states that the wall plates are attached to the support sub-modules. However, the examiner has previously argued that the wall panels 10, 11 are themselves the modules. As these arguments appear to be contradictory, appellant requests that the examiner provide clarification with regard to this issue.

Appellant asserts that the rejection of claim 14 is improper and requests that the rejection of claim 14 be reversed.

Claim 27

Claim 27 recites a bottom landing, a top landing, and a rise comprising a plurality of support sub-modules wherein one of the support sub-modules includes a steel plate having a top edge, a bottom edge and two side edges extending between the top edge and the bottom edge, respectively. Claim 27 further recites that the steel plate presents a continuous, unbroken and generally planar exterior surface from the top edge to the bottom edge and between the side edges for covering an escalator drive machine.

For the reasons set forth above with regard to claim 1, there is no motivation or suggestion to modify Kneipp in the manner suggested by the examiner. Additionally, for the many reasons set forth above, neither Kneipp nor Gschwendtner disclose, suggest, or teach a steel plate that presents a continuous, unbroken and generally planar exterior surface from the top edge to the bottom edge and between the side edges for covering an escalator drive machine.

Further, Kneipp does not disclose a rise that is comprised of a plurality of support sub-modules where one of the support sub-modules comprises the claimed steel sheet. The examiner initially argues that the wall panels 10, 11 shown in Figure 2 are the modules and that the support sub-modules correspond to tubular elements 9. The examiner argues that each of the sub-modules comprises an attachment 14 that attaches the edges of the plurality of wall panels 10, 11 together.

Claim 27 clearly recites that one of the support sub-modules includes a steel plate. The examiner argues that the support sub-modules correspond to elements 9, however, these elements are tubular elements. The tubular elements 9 are clearly not steel sheets. Again, it is not clear whether the examiner is arguing that the tubular elements 9 in Kneipp are replaced by a steel plate from Gschwendtner, or whether the examiner is arguing that the wall panels 10, 11 are themselves the sub-modules that form the support structure where adjacent wall panels are welded long side edges.

As shown in Figure 1, a truss-like structure is used to form the escalator support in Kneipp. This truss-like structure is comprised of a plurality of tubular elements 9, 9b that are attached to main girders 1, 2 that extend the length of the escalator. Thus, Kneipp discloses a traditional truss framework construction configuration and does not disclose a rise that is made from a plurality of sub-modules as claimed.

Further, to replace the tubular elements 9, 9b with a steel sheet as shown in Gschwendtner would clearly defeat the benefit provided by Kneipp. As discussed above with regard to claim 1, Kneipp was seeking to decrease weight by using tubular elements. To replace these tubular elements with a steel sheet would clearly increase the weight and defeat the benefits achieved by Kneipp. Thus, there is no motivation to modify Kneipp in the manner suggested by the examiner.

Finally, neither Kneipp nor Gschwendtner disclose, suggest, or teach using a steel plate as claimed to cover an escalator drive machine. Escalator drive machines typically have been located under landings, not along the rise. The escalator drive machines drive conveying plates along the rise. There is no showing of an escalator drive machine anywhere in Gschwendtner or

Kneipp and there certainly is no showing of an escalator drive machine being located in the rise section of the escalator.

Thus, for the many reasons set forth above, appellant requests that the rejection of claim 27 be reversed.

Claim 28

Claim 28 recites that a first one of the side edges is attached to a first one of the support sub-modules and a second one of the side edges is attached to a second one of the support sub-modules.

For the reasons set forth above with regard to claim 27, there is no motivation or suggestion to modify Kneipp in the manner suggested by the examiner. Additionally, for the reasons set forth above, neither reference discloses, suggests, or teaches a steel plate that presents a continuous, unbroken and generally planar exterior surface from the top edge to the bottom edge and between the side edges for covering an escalator drive machine. The references certainly do not disclose, suggest, or teach attaching side edges of the steel plate to other support sub-modules.

Claim 28 clearly recites that the support sub-modules include a steel plate having side edges that are attached to other support sub-modules. The examiner argues that Kneipp discloses a plurality of sub-modules 9. As discussed above, these “sub-modules” are tubular elements and are not steel plates. As such, these tubular elements do not have “side edges” as defined in the claims. Thus, it is impossible for one “side edge” of tube 9 to be attached to a “side edge” of another tube 9. Further, for the reasons set forth above with regard to claim 28 in Section A,

Gschwendtner also does not disclose a plurality of sub-modules with a steel plate attached to other sub-modules along side edges.

Appellant asserts that the rejection of claim 28 under 35 U.S.C. 103(a) based on Gschwendtner as modified by Kneipp is improper and requests that the rejection be reversed.

Claim 29

Claim 29 recites that the steel plate is welded along the side edges to connect the steel plate to the first one and the second one of the support sub-modules.

For the reasons set forth above with regard to claim 27, there is no motivation or suggestion to modify Kneipp in the manner suggested by the examiner. Additionally, for the reasons set forth above, neither reference discloses, suggests, or teaches a steel plate as defined in the claims. The references certainly do not disclose, suggest, or teach welding side edges of the steel plate to other support sub-modules.

The examiner argues that it would be obvious to weld the Kneipp wall plates 10, 11 to the support sub-modules 9. Claim 29 clearly recites that the support sub-modules comprise the steel plate. The examiner is arguing that the steel plate 10 is being attached to the support sub-module 9. As discussed above, the examiner's sub-modules are tubular elements and do not include any type of steel plate. Tubular elements do not have "side edges" as defined in the claims. Thus, it is impossible for one "side edge" of tube 9 to be welded to a "side edge" of another tube 9.

Further, the examiner has admitted that the wall panels 10, 11 are not part of the support sub-modules as the examiner is arguing that these panels are separately welded to the sub-modules 9. Thus, for the many reasons set forth above, appellant asserts that neither

Gschwendtner nor Kneipp discloses, suggests, or teaches the features set forth in claim 29 and requests that the rejection be reversed.

Claim 30

Claim 30 recites that the steel plate extends along the rise a distance sufficient to cover the entire escalator drive machine. The examiner argues that the steel sheet in Kneipp covers the entire one side of the escalator drive machine, referring to Figures 1 and 2. Appellant disagrees.

As discussed above with regard to claim 27, the drive machine, which drives the conveying plates is not shown to be located within the rise. Figures 1 and 2 of Kneipp do not disclose the position of any type of driving machine. The conveying plates themselves cannot move unless an escalator drive machine powers them. Kneipp does not discuss any driving machine and does not discuss a mounting location for such a driving machine. There is nothing in Kneipp to suggest or teach that the escalator drive machine is positioned along the rise contrary to a traditional mounting location.

Appellant asserts that Kneipp does not disclose, suggest, or teach the features set forth in claim 30 and requests that the rejection be reversed.

Claim 31

Claim 31 recites that each of the support sub-modules is attached to adjacent support sub-modules forming a rigid framework.

For the reasons set forth above with regard to claim 27, Kneipp does not disclose forming a rise from a plurality of support sub-modules. Kneipp certainly does not teach attaching adjacent support modules to each other. The tubular elements 9, which the examiner argues correspond to the claimed sub-modules are not attached to each other, see Figure 1. The tubular elements 9 are attached to the main girders 1, 2 as shown.

Appellant asserts that Kneipp does not disclose, suggest, or teach the features set forth in claim 31 and requests that the rejection be reversed.

Claim 32

Claim 32 recites that the module is welded to other portions of the rise along edges of the steel sheet such that the module extends along the rise a distance sufficient to cover an entire lateral side of the escalator machine.

For the reasons set forth above with regard to claims 1 and 14, Kneipp does not disclose, suggest, or teach a steel sheet with a continuous, unbroken surface from the top to bottom and from side to side wherein the sheet is welded along the side edges for attachment to other portions of the rise. Further, Kneipp does not disclose covering an entire lateral side of the escalator machine located within the rise with the steel sheet.

Escalator machines typically have been located under landings, not along the rise. The escalator machines drive conveying plates along the rise. There is no showing or discussion of an escalator machine anywhere in Kneipp. There certainly is no showing of an escalator machine being located in the rise section of the escalator. Even assuming conveying plates can

be properly interpreted as corresponding to the claimed escalator machine, the claimed steel sheet does not cover an entire lateral side of the escalator machine as set forth in claim 32.

Appellant asserts that Kneipp does not disclose, suggest, or teach the features set forth in claim 32 and requests that the rejection be reversed.

Claim 33

Claim 33 recites that the steel plate extends along the rise a distance sufficient to cover an entire lateral side of the escalator drive machine.

For the reasons set forth above with regard to claim 27, Kneipp does not disclose an escalator drive machine being located in the rise section of the escalator. The escalator drive machine provides the power that drives the conveying plates. No such structure is mentioned or shown in Kneipp. As such, there is no teaching of covering an entire lateral side of the escalator drive machine with the steel plate as claimed.

The examiner has not provided any arguments detailing where this feature is disclosed in Kneipp. Appellant asserts that the rejection of claim 33 is improper and requests that the rejection be reversed.

C. 35 U.S.C. 112, First Paragraph, Rejection

Claims 14 and 30 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the examiner argues that the specification does not disclose the escalator machine being covered entirely (on all sides, not just on both sides) by the steel sheet modules.

Appellant asserts that claims 14 and 30 are fully compliant with 35 U.S.C. 112. The examiner is clearly reading more into the claims than the claim language warrants. The examiner is interpreting the phrase “the entire escalator machine” to mean that the escalator machine is completely surrounded on all sides (top, bottom, left, and right) by the steel sheet. This is out of context of the remaining claim language. It is clear from the language of claim 14, and claim 1 from which claim 14 depends, that the entire side of the escalator machine is what is enclosed by the steel module, not the entire escalator machine itself. Further, it is clear from the description set forth in the specification of the subject application that the entire side of the escalator machine is what is enclosed by the steel sheet.

Similarly, it is clear from the language of claim 30, and claim 27 from which claim 30 depends, that the entire side of the escalator machine is what is enclosed by the steel module. Thus, appellant asserts claims 14 and 30 are fully compliant with 35 U.S.C. 112, first paragraph.

Please note that in an attempt to address the examiner’s concerns, appellant submitted a proposed amendment to add the word “side” to claims 14 and 30 to clarify that the module covers an entire side of the escalator machine. The examiner refused to enter the amendment indicating that the amendment raised new issues that would require further consideration and/or searching. Appellant traverses this assertion by the examiner because the proposed amendment clearly would not have changed the examiner’s search strategy, nor would the proposed amendment have affected arguments presented by the examiner. Again, appellant asserts that claims 14 and 30 as written are fully compliant with 35 U.S.C. 112, and requests that the rejection be reversed, however, appellant is still willing to proceed with the proposed amendment to satisfy any unresolved concerns with this issue.

D. 35 U.S.C. 112, Second Paragraph, Rejection

Claim 32 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Specifically, the examiner argues that there is no antecedent basis for the phrase “other portions of the rise.” Appellant disagrees.

The term “rise” is affirmatively recited in claim 1, from which claim 32 depends. Claim 1 defines the rise as “interconnecting said bottom landing support to said top landing support.” Claim 32 states that the “module is welded to other portions of the rise.” Thus, the rise connects the bottom landing support to the top landing support, and other portions of the rise are welded to the module as recited. Appellant has not claimed “**the** other portions of the rise” (emphasis added). “Other portions” of the rise as recited in claim 32, thus has proper antecedent basis.

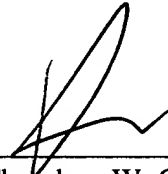
Appellant asserts that the rejection under 35 U.S.C. 112, second paragraph, is improper and requests that the rejection be reversed.

CONCLUSION

For the reasons set forth above, the rejection of all claims is improper and should be reversed. Appellant earnestly requests such an action.

Respectfully submitted,

CARLSON, GASKEY & OLDS

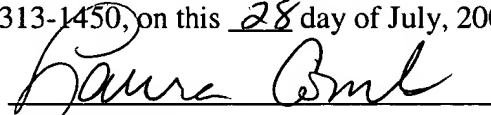


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Dated: July 28, 2005

CERTIFICATE OF MAIL

I hereby certify that the enclosed Appeal Brief is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 28 day of July, 2005.



Laura Combs

CLAIMS APPENDIX

1. A support structure assembly for an escalator comprising:
 - a bottom landing support;
 - a top landing support; and
 - a rise for interconnecting said bottom landing support to said top landing support wherein said rise includes at least one module wherein the module comprises a steel sheet covering an escalator machine, said steel sheet having a top edge, a bottom edge and two side edges extending between said top edge and said bottom edge, respectively, said steel sheet presenting a continuous, unbroken and generally planar exterior surface from said top edge to said bottom edge and between said side edges.
14. The assembly as recited in claim 1 wherein the module is welded to other portions of the rise along edges of said steel sheet such that said module extends along said rise a distance sufficient to cover the entire escalator machine.
27. A support structure assembly for an escalator comprising:
 - a bottom landing;
 - a top landing; and
 - a rise comprising a plurality of support sub-modules wherein one of said support sub-modules includes a steel plate having a top edge, a bottom edge and two side edges extending between said top edge and said bottom edge, respectively, said steel plate presenting a

continuous, unbroken and generally planar exterior surface from said top edge to said bottom edge and between said side edges for covering an escalator drive machine.

28. The assembly as recited in claim 27 wherein a first one of said side edges is attached to a first one of the support sub-modules and a second one of said side edges is attached to a second one of the support sub-modules.

29. The assembly as recited in claim 28 wherein said steel plate is welded along said side edges to connect said steel plate to said first one and said second one of the support sub-modules.

30. The assembly as recited in claim 27 wherein said steel plate extends along said rise a distance sufficient to cover the entire escalator drive machine.

31. The assembly as recited in claim 27 wherein each of said support sub-modules is attached to adjacent support sub-modules forming a rigid framework.

32. The assembly as recited in claim 1 wherein said module is welded to other portions of the rise along edges of said steel sheet such that said module extends along said rise a distance sufficient to cover an entire lateral side of the escalator machine.

33. The assembly as recited in claim 27 wherein said steel plate extends along said rise a distance sufficient to cover an entire lateral side of the escalator drive machine.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

Appeal No. 2004-0389 relates to the subject RCE application. A copy of the decision from the Board of Patent Appeals and Interferences is attached as an exhibit.